

# DNR/PEI FILE EXCHANGE NOTES

May 25, 2005

Attendees:

Vern Schrunk—DNR

Ken McFadden—PEI

- **POLICY/GUIDANCE AND/OR JUDGMENT ISSUES:**

**9LTF07, Frit Industries, Humboldt,** SMR reclass L2N (4 SMRs) , DNR ltr 1/16/98 accepted T2 VERSION1, LR. EPA Region 7/KC involved with ongoing RCRA activities, refer to Note to DNR presented below for additional background. Version 1 to version 2.xx problematic as soil data was not included in Version 2.xx. Recommend reject. (Rev- EM/ QA-KM)

As presented in the draft RP letter:

**Note to DNR:** The 1/16/1998 TIER 2 (VERSION 1) was accepted Low Risk (DNR/JRG reviewed) (Soil Leaching to Groundwater Ingestion to Nondrinking Water Well (Shop Well) – Low Risk and Soil Vapor to Enclosed Space – Potential Confined Space – Nonresidential – Low Risk: The “office basement” was classified low risk (?) for the Soil Vapor pathway and is questionable since the basement is approximately 300 feet west of the soil source. Moreover, it appears the pathways evaluation were erroneous and incomplete, but accepted (e.g. Soil Leaching to Groundwater Ingestion to Nondrinking Water Well; Soil Vapor to Enclosed Space; no soil leaching monitoring well or monitoring well not at the soil source, etc.). Be aware, it is unknown if sanitary sewers or septic system were identified, evaluated, or considered.

Tier 2 soil benzene maximum is 6.1 PPM at B-1 (former gasoline UST location and at (current?) AST location). Certified Groundwater Professional asserts in 1998 Tier 2 soil contamination/source to be excavated in 1998 concurrent with planned site cleanup activities required by EPA Region 7. The assertion is reiterated in the 10/29/1998 SMR. The “PEER” cover letter included with the 11/28/2001 SMR alludes to a Corrective Measure Study (CMS) prepared for EPA Region 7 and a consent agreement being negotiated. However, there is no over excavation or soil removal document or documentation either in the file or any subsequent SMR. Therefore, we have presumed soil removal/over excavation has not occurred and the soil source, B-1 (6.1 PPM benzene) remains. (Note: Preston performed cursory review of EPA databases (CERCLIS and RCRA), no site specific soil corrective action information located.)

Furthermore, the 4/8/1998 (DNR letter) monitoring certificate is problematic as soil gas at the soil source was not included (presumable due to anticipated soil removal asserted in the 1998 Tier 2?). As such soil gas sampling at the soil source has not been performed to date. Additionally, a groundwater monitoring well does not exist at the soil source. Moreover, several pathway/receptor evaluations in the accepted Tier 2 appear erroneous and problematic.

Additionally, the progression from Tier 2 version 1 software to version 2.51 appears to have challenged the out of state Certified Groundwater Professional as numerous deficiencies, errors and omissions apparent. Refer to subsequent deficiencies #1 and #2. A revised Tier 2 (soil/soil leaching reevaluation included as an Appendix 12 to the next SMR) appears prudent and necessary to ascertain receptor pathway and site risk classification.

**For DNR Review:** Upon review of the reports and file information, we cannot reclassify the site at this time. The site remains classified **low risk**. (Note: It appears soil over excavation or removal has not been conducted or if soil removal has been performed, not reported to the department. At minimum, the Soil Vapor to Confined Space – Potential Confined Space Nonresidential and Potential Sanitary Sewer Nonresidential Pathways remain low risk with other pathways (e.g. Soil Leaching to Groundwater Ingestion and Vapor to Enclosed Space indeterminate. (Note: A revised monitoring certificate will not be provided pending resolution of subsequently listed deficiencies.)

**For DNR Review:** The department strongly urges and encourages your Certified Groundwater Professional to thoroughly review 2.51 Tier 2/SMR User’s Manual and Tier 2 Guidance prior to performing the required evaluation.

The following deficiencies were noted during the review of the SMRs. Be aware the comments and problems noted below may affect pathways, receptors, risk classification, site-specific target levels, and the proposed

monitoring plan:

**Concerning SMRs received on November 28, 2001, November 27, 2002, and October 27, 2003:**

1. The SMR/Tier 2 evaluation is incomplete. The Soil Analytical Data from the Tier 2 (Version 1) received on January 16, 1998 is not included in the Tier 2 portion of the software. Refer to deficiency #2. The site appears to remain low risk for Soil Vapor to Enclosed Space pathways. Please include and incorporate the Soil Analytical Data from the Tier 2 received on January 16, 1998 into the software. Be aware pathway and receptor evaluation and risk classification for soil and soil leaching cannot be completed unless soil data is included. Evaluate the soil and soil leaching pathways using normal Tier 2 procedures. Include all required Tier 2 elements within Appendix 12 of the SMR.
2. The Soil Leaching and Soil Vapor/Soil to Plastic Water Lines Receptor Summary Tables are inadequate and incomplete. Soil Analytical Data from the Tier 2 report (Version 1) received on January 16, 1998 is not included in the software. Therefore, the soil and soil leaching pathways were not appropriately evaluated resulting in inappropriate pathway risk classification. Note: The "Tier 2 Risk" column classification identified for chemicals of concern show "NSC: No source concentrations." Refer to deficiency #1. Also, the "Tier 2 Risk" and "Current Risk" columns are blank. Please include the soil data from the accepted Tier 2 evaluation and revise all affected sections.
3. **For DNR Review:** Whether the Soil Leaching pathway evaluation can be properly performed is questioned. No groundwater well exists at the benzene soil source (B-1). Due to incomplete data within the SMR software, the department is unable to determine whether any of the existing nearby wells meet soil leaching monitoring well criteria for pathway evaluation. The department requires a groundwater monitoring well be installed at the soil source. Sample the groundwater in accordance with guidance. Evaluate the Soil Leaching pathway(s). The Potential Receptor Summary is inadequate and incomplete. The Groundwater Well and Enclosed Space Surveys were not conducted within the past year. The Groundwater Well and Enclosed Space Surveys were last conducted for the Tier 2. Please perform the required potential receptor survey elements. Provide an updated and revised potential receptor summary table, and associated documentation. Furthermore and additionally, upon examination of the Tier 2, the department cannot ascertain whether the Enclosed Space/Conduit Survey included/considered sanitary sewers/septic system. Sanitary sewers/septic systems on site and within the appropriate survey radius (or Receptor Identification Plume) must be identified and if necessary evaluated. Provide a revised Enclosed Space/Conduit Table and Map including sanitary sewers and/or septic system.
4. ((refer to draft RP letter)).
5. ((refer to draft RP letter)).
6. Soil gas monitoring at the soil source was not performed and is not proposed. The Soil Vapor to Enclosed Space pathway is at minimum "low risk" for the potential confined space and potential sanitary sewer pathways and annual soil gas monitoring at the soil source (6.1 PPM benzene at B-1) is required. Please provide the soil gas monitoring plan and table. Perform the required annual soil gas monitoring and reporting in accordance with guidance. Ensure future SMRs contain required soil gas documentation.

Refer to draft letter for additional issues

The department has identified some technical problems, which may not be acceptable in future SMR submittals. These problems do NOT require correction in the report, but are identified below for the attention and benefit of your consultant.

**Concerning SMRs received on October 29, 1998, November 28, 2001, November 27, 2002, and October 27, 2003:**

1. The Title Page does not have the UST Registration Number. The UST Registration Number is 7910334.

**Concerning SMR received on October 29, 1998:**

1. **For DNR Review:** The groundwater benzene concentrations increased greater than 20 percent in MW-12 and MW-14 based on the 7/28/1998 groundwater sampling event. Also, the groundwater benzene

concentrations were greater than the Tier 2 groundwater maximum (MW12 with 240 PPB benzene). Furthermore, MW-14 benzene concentration (1,390 PPB) exceeded Groundwater Ingestion target levels and the pathway is complete. The Tier 2 should have been reevaluated using the new groundwater maximum to evaluate the soil leaching and groundwater pathways. However, the department acknowledges groundwater concentrations in MW-12 and MW-14 have since been below method detection limits.

2. Pertaining to the 4/8/1998 DNR letter deficiency #1 is inadequate. The Soil Leaching Receptor Identification Maps are incorrect. Soil Leaching Groundwater Ingestion to Nondrinking Water Wells should present the 290 PPB benzene receptor identification plume, not 5 PPB benzene. The Soil Leaching to Groundwater Vapor is questioned as it presents a 5 PPB benzene receptor identification plume and not the appropriate vapor to enclosed space target level. Moreover, whether the soil leaching pathways were properly evaluated is questioned. Regardless, the department is requiring soil and soil leaching pathways to be reevaluated as previously mentioned.
3. The Receptor Summary Table is questioned. The Soil Vapor to Enclosed Space – Office Basement risk of “L” is questioned. The office basement (Actual Confined Space Nonresidential) appears to be no action required and presumed not encompassed by the receptor identification plume/50 feet extensions as it 300 feet west of the localized soil contamination and maximum (B-1). Actual soil vapor receptors are either high risk or no action required, not low risk. Moreover, Soil Vapor to Potential Confined Space and Potential Sanitary Sewer pathways are not listed and should be low risk. Additionally, the Groundwater Ingestion to Nondrinking Water Wells, Shop Well and Deep Well, are not listed and apparently were not evaluated using the 7/28/1998 groundwater data (1390 PPB benzene).
4. Numerous other deficiencies exist, but are not presented herein due to in part the out dated Version 1 and previously listed requirements.

**Concerning SMR received on November 28, 2001:**

1. Groundwater Monitoring was not performed in 1999 and 2000 as required and in accordance with the monitoring certificate. The “PEER” cover letter (11/20/2001) states “*No additional groundwater monitoring was conducted at the site in 1999 or 2000 while EPA was reviewing the CMS and discussions regarding the framework for cleanup implementation were ongoing.*” The reason is unacceptable. Groundwater monitoring was required for 1999 and 2000.

Refer to file deliverables and draft RP letter for additional def’s. For your review and consideration. Files returned today.

**7LTU33, Casey’s, Dallas Center, RT2 , HR** Accepted HR 1/13/01, A CADR was not received. H2L reclass rejected in the dept’s 11/14/02 letter and 8/27/03 letter following OE report review. Deficiencies normally would result in reject letter RP template, but used ‘teleconference’ letter format to move site into CA and due to unsuccessful OE. (Rev- KP/ QA-KM)

As presented in the draft RP letter:

**For DNR review:** Based on our review deficiencies (issues #6 and #7) in the department’s 8/27/03 letter have not been adequately addressed. The reclassification of the Soil Vapor to Enclosed Space and Soil Leaching to Groundwater Vapor to Enclosed Space pathways to NAR is not accepted (refer to deficiencies #1, #2 and #3 below). The site is classified **high risk**.

The DNR has identified some technical problems in the revised Tier 2 SCR. Be aware the comments and problems noted below may affect pathways, receptors, risk classification, site-specific target levels (SSTLs), and the proposed monitoring plan. Your certified groundwater professional should be prepared to discuss how these deficiencies will be addressed during the teleconference.

1. **For DNR review:** The reclassification of the Soil Vapor to Enclosed Space and Soil Leaching to Groundwater Vapor to Enclosed Space pathways to NAR is questioned and not accepted. From the x, y coordinates provided in the software for the soil gas well SG-NWall4 (63.4; 65.6) it appears the soil gas

well was installed within 5 ft of NWall4 (61.4; 67.6) but within the limits of overexcavation. Therefore, the representativeness of the soil gas results is questioned. The soil gas well should have been installed within 5 ft of NWall4 but in the native soil to provide representative soil gas results. Please reevaluate soil pathways using normal Tier 2 procedures. Revise all affected Tier 2 sections, tables and maps. Refer to deficiencies #2 and #3.

2. **For DNR review:** The soil toluene source maximum location and concentration are questioned. Refer to issue #6 in the department's 8/27/03 letter concerning PL-2 location. The response to issue #6 provided in 4/21/05 e-mail LC (Seneca)/ED (DNR) is not accepted. The PL-2 location is described as "may have been incorrect". No documentation was provided (field notes, maps) to substantiate the claim of the incorrect previous location. The overexcavation samples WWall2 and Base5 can not replace data from PL-2 as it is outside the overexcavation limits based on the x, y coordinates assigned to the location in the software. Unless adequate documentation is provided to the contrary, PL-2 remains the soil toluene source. Please revise the risk classification for the soil toluene pathways. Revise all affected Tier 2 sections, tables and maps.
3. **For DNR review:** The soil maximum concentrations are questioned pending resolution of issue #7 in the department's 8/27/03 letter. Additional drilling in native soil is required to provide adequate number of field screening and lab samples for the dimensions of the previously performed overexcavation and determining the target levels for corrective action (e.g. Soil Leaching – Protected Groundwater Source pathway is high risk).

Refer to file deliverables and draft RP letter for additional def's. For your review and consideration. Files returned today.

**8LTI97, Lloyd's Texaco, Council Bluffs, SMR/RT2 HR (3rd RT2), RT2 Accepted HR 1/2/01, CADR** required never received, SMR/RT2 accepted HR with def's DNR ltr 1/30/03, CADR due, A CADR was not received. Deficiencies listed would normally result in draft RP letter 'reject template', however "teleconference" RP letter template used. (Rev- KP/ QA-KM)

As presented in the draft RP letter:

Note to DNR: We considered "reject" template. However, due to site specifics, previously accepted Tier 2 high risk 1/30/03 DNR letter, considering the 3/21/05 Tier 2 rerun was unnecessary and not required. The "teleconference" letter format followed to move site into corrective action.

#### **Concerning SMR portion of the report:**

1. Statements in the Evaluation of Analytical Data table and Tier 2 reevaluation are questioned. While SMR guidance is cited correctly ("When to rerun Tier 2"), the statements are not applicable to the site. Groundwater concentrations in the source well (MW-5) did not increase more than 20% for two consecutive sampling events, and none of the concentrations in other sampled monitoring wells exceeded the simulation value for that point. Note: the SMR groundwater monitoring plan table was not provided (refer to deficiency #7 below). The Tier 2 was unnecessarily rerun. The risk classification and SSTLs for groundwater pathways established in the accepted Tier 2 remain applicable. The SSTLs and risk classification for Soil Leaching and Soil Vapor pathways established in the Tier 2 revisions submitted with the 2002 SMR and accepted with deficiencies in the department's 1/30/03 letter remain applicable. Note: refer to the "do not require" section for noted deficiencies associated with the Tier 2 rerun. Also, refer to deficiency #2 below.
2. Statements in the Evaluation of Analytical Data table are questioned. The statement on the second page of the Evaluation of Analytical Data section "*mapping of the theoretical plumes by the software indicates that the soil gas does not impact any of the actual receptors*" appears to be misleading. Two soil gas locations at the site (SVW-1 and SVW-2) failed soil gas in 2001 and 2005. No passing soil gas results/locations are present at the site and in the vicinity. The software can not map a soil gas plume based only on two failed

soil gas results as the soil gas plume is undefined. Please explain the statement.

Refer to RP draft letter for additional issues/defs. The department has identified some technical problems which may not be acceptable in future Tier 2 submittals. These problems do NOT require correction in the report, but are identified below for the attention and benefit of your consultant.

**Concerning revised Tier 2 included in Appendix 12:**

1. The Tier 2 title page signed and dated was not provided.
2. The software file corresponding to the Tier 2 rerun results (maximums, etc.) was not included with the report.
3. The Site Hydrogeology section was not provided. Groundwater source dimensions changed.
4. Soil gas sampling at the groundwater source question in the software is not answered correctly. Soil gas sampling at the groundwater source was conducted and failed. The software soil gas question should have been answered in accordance with the failed soil gas results. Answering the software question correctly should have produced the correct soil gas information in the Tier 2 Data Before Modeling section (p. 4) and Preliminary Pathway Evaluation Requirements table (p. 6).
5. The Groundwater Source Tier 2 Receptor Summary table is not provided.
6. The Groundwater Analytical Data table, Risk Justification section and groundwater monitoring plan table and map are not provided.
7. The Receptor Evaluation maps and SSTL table are not provided for the Groundwater Vapor – Confined Space Residential and Sanitary Sewer Residential pathways. The SSTL tables are not provided for the Groundwater – Potential Confined Space and Potential Sanitary Sewer pathways. The Groundwater to Plastic Water Line RID plume map is not superimposed on a Site Plan map.

Refer to file deliverables and draft RP letter for additional def's. For your review and consideration. Files returned today.

**8LTB06, Devils Glen Park, Bettendorf, RT2 (3<sup>rd</sup> rev) Low to High, Non-granular Bedrock, T2 accepted LR 11/30/00, 12/20/01 DNR SMR review ltr –issues TBA, FP detected at MW-3 in '04, Recommend reject due to core issues. (Rev- SS/ QA-KM)**

As presented in the draft RP letter:

Refer to RP draft letter defs 1-5...

Note to DNR: The December 20, 2001 DNR SMR review letter appears to give contradictory guidance regarding the groundwater monitoring plan. The first paragraph indicates the monitoring wells identified in the numbered list could be eliminated from the monitoring plan. However, the NOTE following the numbered list states all previously dry wells are required to be sampled if they are found to produce water during future monitoring events. Destroyed and dry wells are not specified in the DNR letter, as it appears such information had not been provided to the department at that time. The following deficiency is based on the assumption that all existing, previously dry groundwater wells must be included in the monitoring plan and sampled if possible.

**For DNR review:**

In order to properly monitor the high risk Surface Water Pathway, an additional monitoring well should be installed directly between groundwater toluene source MW-3 and Duck Creek – i.e., between the former locations of destroyed groundwater monitoring wells MW-11 and MW-12. The department acknowledges comments made in the December 20, 2001 SMR review letter. However, monitoring well MW-9 is *not* a satisfactory point of compliance, as defined in Tier 2 Guidance (p. 49). Additionally, the Groundwater Monitoring Plan table (p. 22) is incomplete. As long as monitoring wells MW-1 and MW-2 exist, they must be included in the monitoring plan table, checked during monitoring activities, and sampled if found to produce water. Refer to the NOTE in the December 20, 2001 DNR letter (p. 1). Amend the monitoring plan table and update the Monitoring Plan Map (App. 14).

## **7.For DNR review:**

The referenced Tier 2 Report was *not* prepared in the proper format. Low risk monitoring was being performed at the subject site. Therefore, any reclassification request should have been in the form of a Site Monitoring Report with the appropriate revised Tier 2 sections included as an attachment. Also, the report title page should indicate the report is a revised Tier 2 SCR. Ensure future reclassification reports are prepared in accordance with DNR guidelines.

**NOTE:** Contrary to the cover page, the September 2003 submittal is *not* a Site Monitoring Report (SMR), but rather a revised Tier 2 Report, as indicated on the subsequent report title page generated by the Tier 2 software file and apparent upon inspection of the report body and attachments. Moreover, it is unclear why a Tier 2 Report was submitted instead of the required Site Monitoring Report. The department acknowledges the SMR in question was prepared by your previous consultant.

Refer to file deliverables and draft RP letter for additional def's. For your review and consideration. Files returned today.

- **EXPEDITE REVIEWS:** None
- **PROJECT MANAGEMENT:** Your (JH) 4/5/05 emails regarding 7LTT32, Moco Two, Lone Tree; 7LTU33 Casey's Dallas Center; 7LTH55 City of Fort Dodge, Fort Dodge acknowledged and replies provided 4/5/05. Updates:

7LTT32, Moco Two, Lone Tree, deliverables prepared, file returned 4/20/05;

7LTU33, Casey's, Dallas Center, (ED email update 4/18, 4/21, CGWP provided responses to DNR letter on 4/21 in email to ED. ('Hold' designation removed); File returned today (5/25)

7LTH55, City of Fort Dodge, deliverables prepared, file returned 4/6/05.

SMR reclass reprioritization acknowledged and implemented.

Emails pertaining to Restrictive Covenant implication(s) acknowledged, internal searched performed on in office files (SMR L2N only). No files id'd containing RC's.

7LTX35, Carroll County Shop, Carroll, file returned today, multiple vapor sample issues, problematic soil sampling, vapor failures, SWL issues.....please refer to draft RP letter in file for specifics (file returned today).

8LTS66, South Central Coop, Lacona, file returned today, TEH-d soil/GW issues, sensitive receptors present, zoning issues for DNR Legal....please refer to draft RP letter in file for specifics (file returned today)

7LTC25: file returned today per VKS request (public requested file), PEI tracking does not reflect temporary file return.